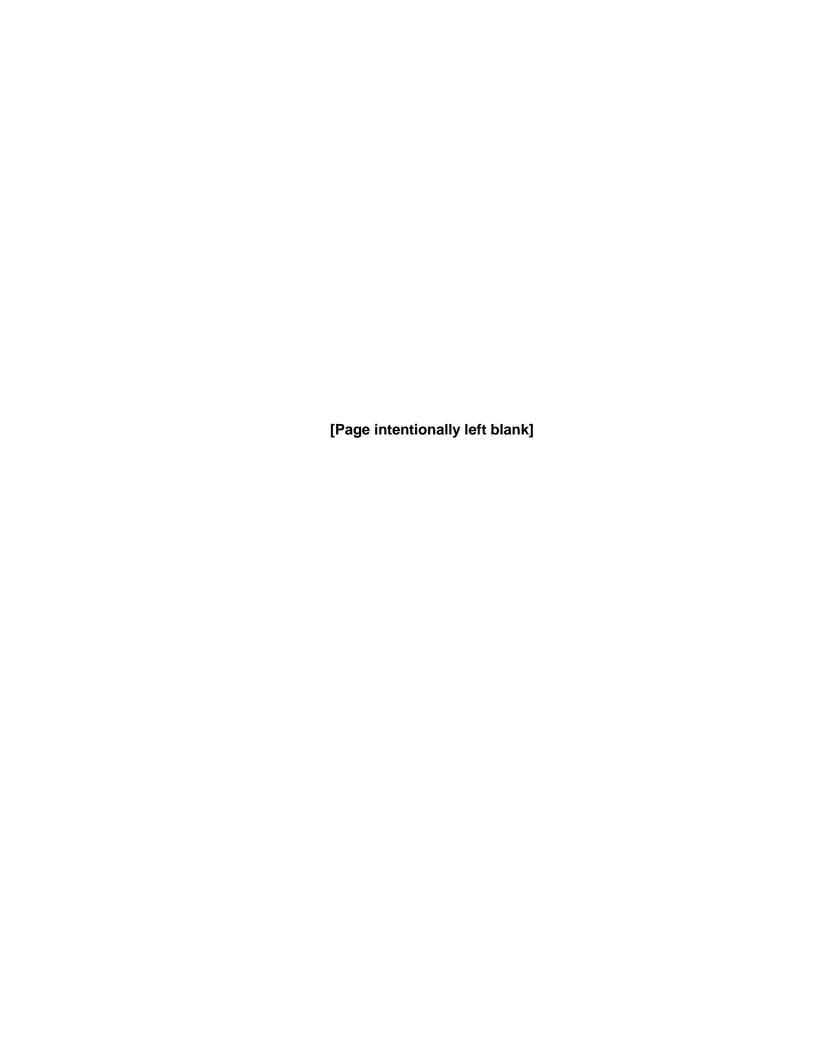
## How to Establish a



Local Health
Tick-borne Diseases
Community Intervention
Program



# How to Establish a Local Health Tick-borne Diseases

**Community Intervention Program** 

2008

Produced by the Connecticut Department of Public Health in collaboration with the Ledge Light Health District, Torrington Area Health District, Westport Weston Health District, and the Connecticut Agricultural Experiment Station.

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## Introduction

## Lyme Disease

In the northeastern United States, Lyme disease, caused by the bacterium *Borrelia burgdorferi*, is transmitted principally by the bite of the blacklegged tick, *Ixodes scapularis*. In endemic areas, the annual incidence of Lyme disease has been related to the abundance and distribution of infected nymphal *I. scapularis*, whose peak activity is mid-May through July (Mather et al., 1996; Stafford et al., 1998), occasionally extending well into August in Connecticut. The tick life cycle is 2 years. Because of this, it is possible to come in contact with ticks at any time of the year provided there is no snow cover. The agents of human babesiosis and anaplasmosis (formerly known as human granulocytic ehrlichiosis) are also transmitted by *I. scapularis* and coinfections are possible.

While Lyme disease is usually a mild illness and treatment in the early stages is generally effective, it may cause serious illness involving multiple body systems. Illness can result in persistent symptoms after treatment and treatment of late-stage Lyme disease may require intravenous antibiotic therapy.

The Connecticut Department of Public Health (DPH) has maintained one of the most comprehensive Lyme disease surveillance systems in the country. Surveillance clearly shows that Connecticut had the highest reported rate of Lyme disease from 1991-2002. Surveillance also shows that Lyme disease can be acquired in any of Connecticut's eight counties, that some areas of the state remain more affected than others, and that the disease has spread inland and westward along the cost since 1977 (Cartter et al., 1989). These findings have been supported by tick studies that show infected ticks in all counties of Connecticut. The entire state of Connecticut is considered endemic for Lyme disease, although some towns have higher incidence of the disease than others. Links to annual Lyme disease statistics are available on the DPH website at:

http://www.ct.gov/dph/cwp/view.asp?a=3136&Q=399694&dphPNavCtr=|46973|#46999. Or you may go to the DPH home page and select "Statistics & Research" from the left navigational column, then "Disease & Injury Surveillance", and "Lyme Disease".

The emergence of Lyme disease as a public health problem lies in the changing ecology of the northeastern and mid-western US (Barbour and Fish, 1993). Today, persons with the highest risk for tick bites and Lyme disease are those residing in suburban residential developments with adjacent wooded tracts and rural homes within woodland environments where the hosts for the tick flourish (Cromley et al., 1998; Maupin and Fish, 1991; Stafford and Magnarelli, 1993). In Connecticut, most cases of Lyme disease are probably acquired peridomestically. Therefore, efforts to educate residents on personal prevention measures and ways to control ticks on residential properties, focused particularly in areas of high disease incidence, can reduce the number of Lyme disease cases. Reductions in tick abundance on residential properties is possible with changes in landscape design, and acaricidal treatment of peridomestic environments and exclusion of primary tick hosts such as deer and mice.

## **Connecticut Intervention Programs**

The DPH worked through a series of cooperative agreements with the Centers for Disease Control and Prevention (CDC) to conduct Lyme disease prevention research. The primary goal was to reduce the incidence of Lyme disease and other tick-borne diseases, including babesiosis and anaplasmosis. During this time the DPH worked collaboratively with the Connecticut Agricultural Experiment Station (CAES), the Connecticut Emerging Infections

Program at the Yale University School of Medicine, the University of Connecticut's Geography Department and Center for Survey Research and Analysis, the Westport Weston Health District (WWHD), the Ledge Light Health District (LLHD), and the Torrington Area Health District (TAHD).

Federal funding for the Connecticut community intervention projects in the previously mentioned health districts concluded March 31, 2008. Their programs included twenty-one towns in three counties. Active surveillance was begun in each of the intervention sites to help determine a truer Lyme disease incidence. The main activity was to implement a population-based intervention strategy to improve prevention of Lyme disease and other tick-borne illness. These integrated strategies included methods of reducing tick abundance on private property, promotion of personal protective measures, and implementation of landscape modifications. As part of the personal protective education, the general public should be instructed on how to identify different tick species and different tick life stages. This is important to assist them during bodily tick checks.

There is reason to believe that, if employed sufficiently, personal protective measures and environmental control of ticks and vertebrate hosts can reduce the number of cases of Lyme disease among residents in endemic areas. An integrated tick management program will require a variety of tools that can be used under different circumstances and with different segments of the population. Various costs are associated with these efforts.

The impact of a community Lyme disease prevention program is difficult to assess by monitoring the number of reports of Lyme disease cases alone. Benefits also include empowerment of residents who wish to adopt prevention measures, strengthening community cohesion through collaborations to reduce the risk of illness that threatens everyone, and positive public relations for local health departments by responding to an significant public health threat. For the foreseeable future, Lyme disease is likely to be an important community concern throughout the state that defies easy solutions but one that individuals and communities can take steps to reduce.

## **Intervention How To**

Prevention efforts in the WWHD, LLHD, and TAHD, resulted in lessons learned and materials created that can be beneficial for other local health departments in their efforts to reduce the incidence of Lyme disease in their communities. The DPH distributed a survey to local health officials with questions concerning plans on starting a Lyme disease community intervention program, interest in obtaining information about a Lyme disease community intervention program, format of said information, and various other questions related to Lyme disease intervention. The majority of respondents did not have plans to begin a Lyme disease intervention program. However, they were interested in receiving information about how to start a program. Respondents were also most interested in receiving this information in a combined format of printed materials and a CD with copies of materials already created available for copy.

We have taken your suggestions and have created this "how to" guide, with CD, to assist in your endeavors to create a Lyme disease intervention program for your community. We have included methods and resources that should complement any budget. By using the materials enclosed, and the lessons learned from the WWHD, LLHD, and TAHD intervention programs, you may be able to raise awareness among residents of the ways they can reduce their risk of acquiring tick-borne diseases including Lyme disease.

## **Getting Started**

To ensure that the community is involved and supports the intervention project, each local health department can organize and lead a coalition of community partners to form an advisory committee. While community partners may be unique to each project, organizations and individuals selected to serve on the advisory committees reflect the diversity, resources and expertise existing in each community to develop program strategies and activities. A list of potential local agencies and civic groups to partner with is attached for your convenience (**Appendix A**). The emphasis is to create a multi-level approach to blanket the community with similar prevention messages and reinforce positive behavioral changes.

You will want to hold a meeting to introduce the project to potential advisory committee members. Getting these community partners on board is an important first step. These partners may help through donation of goods and/or services as well as their time. Ask partners how they are willing to help. They may offer reduced quantity rates for larger groups of residents who decide to use their service after hearing about the project. For example, if several adjacent home owners in one neighborhood decide to start using insecticides to reduce the number of ticks on their property, committee members who have companies specializing in insect control could be asked to offer a discount to those individuals. Through open communication, the local health department and pesticide companies can come to agreements concerning the number of new households needed before the discount will be honored. The same may hold true for landscape companies.

The program aims to increase use of environmental and landscape measures by residents to reduce ticks; increase use of landscape management services by commercial lawn care/landscape businesses providing tick control services, increase information about how residents can protect themselves from Lyme disease, and formal tick control programs for recreational town-owned properties.

Health department staff can use a variety of approaches to reach residents including setting up community meetings, participation at community events (i.e. fairs), landscape demonstration projects, distribution of educational and/or promotional materials (**Appendix B**), use of local mass media (**Appendix C**), and development of electronic materials, such as videos or Internet sites. In the TAHD, lime green is used as an identification factor in promotions including the use of a lime green Volkswagen "Bug" used by staff on department business and has become widely recognized among residents of the 16 towns included in the TAHD. The LLHD has posted signs on garbage trucks that are seen throughout their community. The idea is to get the message out using common as well as unique methods.

To increase the utilization of tick control measures on privately and publicly owned properties, tick control landscape management techniques are demonstrated at specific sites in each district. Demonstration sites that reflect typical residential, park, school, and open space environments were selected and donations of material, labor, and equipment were sought from the community.

Landscapers, pesticide applicators and garden centers in intervention sites were educated on tick control measures. In Connecticut, pesticide applicators are certified and licensed by the Department of Environmental Protection (DEP). Pesticide applicators were offered credits toward their re-certification process if they attended a free educational program on tick control

methods. To search for a certified applicator in your area, go to: http://www.kellysolutions.com/CT/Applicators/index.htm.

A pamphlet developed by the DEP about what to expect from tick control companies, proper use of pesticides, and the certification program is available at: http://www.ct.gov/dep/lib/dep/pesticides/ipmbroch.pdf.

## **Establishing an Advisory Committee**

A variety of viewpoints of individuals from different "walks of life" is very useful for a community program. Contact people with a variety of backgrounds and experience that will help you meet your goals. People with experience in pest control, healthcare, public works, education, politics, landscaping, gardening, extension service employees, veterinary health, media representatives, and stay at home parents. Networking will help identify potential members.

To get local physicians involved, consider having a lunch and learn. Discuss the various topics of Lyme disease and bring educational materials suitable for this audience. This will give them an opportunity to network and may be a good time to bring up other important public health issues

Screen candidates carefully – get to know them before asking them to join the advisory committee. Members will need to be individuals who will be open to diverse views and ideas and have experience working on committees or in team environments.

Once you have selected members for the advisory committee, welcome them with a letter of appreciation and a request for at least three choices for a day and time that is best for them to attend regular meetings. The advisory committee can decide how often the group should meet. They may decide initially that they need frequent meetings and less often as the program becomes established. It can be an agenda item.

Develop a "call list" that includes names, addresses, contact phone numbers (home, work, cell, which ever number they prefer you contact them at), fax numbers, and e-mail addresses for all participants (**Appendix D**). Request involvement of committee members by asking for a volunteer to send meeting reminders to the others, and a volunteer to keep minutes of each meeting.

All members should have an opportunity to learn about Lyme disease and prevention methods before discussions begin and decisions are made. A PowerPoint presentation at the first meeting and a "gift" of a printout of the <u>Tick Management Handbook</u> (by Kirby Stafford of the Connecticut Agricultural Experiment Station (CAES)) will introduce them to all aspects of Lyme disease and ticks (**Available on the CD**).

Discuss objectives and create a list to target short term and long term goals. Set time lines and deadlines and discuss individual responsibilities to meet the project goals. Encourage members to take educational materials with them after meetings for distribution in their residential regions or professional organizations.

## **Holding a Community Meeting**

A community meeting will give you an opportunity discuss tick-borne diseases issues, show a slide presentation and distribute educational materials. The local elected official should be notified and invited to attend and possibly speak at the meeting. While the community meeting can be beneficial, it will need careful planning to be successful.

It is also a good time to hand out a short survey for the attendees to express their concerns about tick-borne disease issues. The feedback from this survey will help determine potential tick-borne disease projects for the community at large. The survey can include questions about knowledge, attitudes and beliefs of tick-borne diseases; issues such as willingness to use pesticides on private property; and willingness to do tick checks on a timely basis. Questions can also include whether or not residents believe that a landscape modification demonstration site is worthwhile for the community. When these types of questions are answered it will better help the local health administration determine where to put their resources.

## 1. Setting Up a Location and Time

The location should be centrally located and easily accessible, have enough room for a larger crowd, and be familiar to residents. Some potential meeting locations are: schools, libraries, civic halls, town hall, and recreation centers.

The meeting should be held at a time that will draw the largest number of people. Generally, early weekday evenings around 7:00 p.m. are a good time. Members of the advisory committees should be invited and given an opportunity to introduce themselves and their businesses to the community.

Once the meeting is set, you will need to provide clear written directions for attendees. Also, be sure to set the meeting room up appropriately with a microphone so that everyone hears your message. Perhaps one of the attending advisory committee members will sponsor the meeting and provide refreshments for the local residents. Remember, although the meeting will be about the Lyme disease community intervention program, this meeting will also give attending members of the committee exposure to the community they serve.

#### 2. The Agenda

Be sure to involve the advisory committees in developing an agenda. The agenda should make the goals of the meeting clear for everyone. This is a good time to distribute the survey and some of the educational material to residents. The local health director or an elected official should facilitate the meeting.

#### 3. Materials

The CDs that were sent with this guide have a great deal of educational materials that can be printed and distributed. In addition, you can create your own flyers, posters, or brochures by extracting information from these items. You may want to keep a record of everyone who attends your meeting(s) so that you may be able to contact them with future information on other meetings or innovative Lyme disease information. A sample of a sign-up sheet with areas for names, addresses, phone numbers, and e-mail addresses is also included in the materials. Also on the CD, is a PowerPoint presentation about tick-borne diseases. Although this slide presentation can be used as is, the local health educators can extract the information that they believe is most important for their audience. The slide presentation is a shell, or template, that can be manipulated to meet the needs of the local residents. Several

slides have statistics that can be updated annually by the local health educators once the data is posted on the DPH Website at:

http://www.ct.gov/dph/cwp/view.asp?a=3136&Q=399694&dphPNavCtr=|46973|#46999. Select the Lyme disease statistics you need. If new maps are needed, please contact the DPH at (860) 509-7994.

#### 4. Get Them There

Although some of these methods will not work for all communities it is meant to give you an idea of how to ensure a good turnout for the meeting. You can:

- Contact other community groups about the meeting.
- Include a notice about the meeting in the local paper either on a community bulletin board or through a paid advertisement.
- Ask the local radio station(s) to make a public service announcement.
- Inform the television stations of the meeting.
- Post notices in common locations like libraries, town hall, or local eating establishments.
- Ask schools to distribute flyers to students and post on bulletin boards.
- Request that advisory committee members bring someone with them.
- Ask local churches to put a notice in their bulletin.
- Put something on the local health department web site.
- Post a sign on the town-green.

## **Getting the Word Out / Media Sources**

Some tips on how to get free advertising. The key is NETWORKING! Think of advertising as trying to get information to the general public.

- Join the Chamber of Commerce (This costs money but there are many benefits).
   Network at any "after hours" events sponsored by the chamber let the members know that you would like to "spread the word" about Lyme disease. Ask if they would like to offer space in their company newsletter or if they would like to support a radio spot.
- Contact the Human Resources Department of larger corporations/organizations and ask
  if they would be willing to donate a little space to advertise the community Lyme Disease
  Program.
- Contact the Mayor or First Selectman's assistant and request space in the local town newsletter.
- Contact local Park and Recreation Departments, churches, and schools to request they
  add information concerning Lyme disease in their newsletters.
- Cultivate "sources" at local newspaper, TV and radio stations (meet these people at Chamber of Commerce events, call the station, look at their website to get contact information etc).
- Interviews are often noticed more than "advertisements" but they accomplish the same goal of informing the public. Contact local newspaper and radio sources and give them

some "news" to write about (number of Lyme Disease cases, number of ticks that test positive from the town(s) in the local health department or district, emergence of the nymphal stage of the tick in the Spring, or adult stage in Fall, lists of Fall yard clean-up suggestions to reduce the risk of contracting Lyme Disease etc.) This information can often be obtained from the CT DPH and CT Agricultural Experiment Station website. Write a press release and submit with a photo or graphic attached to make it easy for them to include in a "Health and Wellness" Supplement.

- Create a network of email contacts and email a short "blurb" of seasonal Lyme disease information every few months. Request that they forward this health information to those in their contact lists.
- Plan a children's poster contest and arrange for a local merchant to display the submissions in a store window – free advertising!
- Contact the local librarians (town and college) and offer to give them pictures and materials to create a three dimensional display or a bulletin board display of Lyme disease information and books.
- Offer to answer questions from the public on a local media talk show.
- Contact parent-teacher organizations ask if they would be willing to distribute information about Lyme disease to their members.
- Contact representatives from teacher's unions (and other unions too) ask if they would be willing to include information about Lyme disease in their newsletters or mailings.
- Contact local school nurses and offer materials for them to "advertise" Lyme disease
  prevention. Some nurses are responsible for teaching health classes or providing
  changing exhibits on health. (Teachers may help too but they are often asked to cover
  more than they can do in a school year).
- Call large businesses in the area speak with someone in the Human Resources
  Department and explain that you have information that you would like distributed to their
  employees ask them if an insert in the employee's payroll envelope is possible. Many
  large companies are committed to keeping their employees informed about health
  matters they may even offer space at their annual company "Health and Safety" Day,
  or "Lunch and Learn" series.
- Call landscaping and gardening businesses ask if they would like to sponsor an ad about "landscaping for tick control".
- Contact local garden clubs to speak at their meetings, getting the message directly to a high-risk population.
- Encourage the advisory committee members to schedule presentations at their organization's weekly or monthly meeting (assuming you have asked representatives from Rotary, Lions' Club, Kiwanis, etc., to serve on the committee).
- Contact local physician practices to make educational materials available to their patients.

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#### **Tick Control and Pesticides**

## Take an Integrated Approach

There are many methods that can be used to reduce the tick population on properties. Utilization of landscape management techniques as well as pesticides can be used on privately and publicly owned properties for tick control. Take advantage of the tick's own biology and behavior to maximize tick control all season long. Some landscape management techniques include:

- Keep grass cut short.
- Remove leaf litter, brush, and weeds at the edge of the lawn.
- Restrict use of groundcover, such as pachysandra.
- Remove brush and leaves around stonewalls and woodpiles.
- Avoid landscape plants that deer like to eat.
- Seal stonewalls and small openings around the home.
- Move firewood piles and bird feeders away from the home.
- Trim tree branches around lawn edge to let in more sunlight.
- Create a 3-foot wide wood chip or gravel border between lawn and woods.

Knowing your options is the key to pest control. A non-chemical method of pest control can be as effective and convenient as a chemical alternative. Take the time to learn about the alternatives and integrated pest management systems.

### To Spray or Not to Spray?

The decision to use pesticides on your property is up to the homeowner. Research shows that pesticides are the most effective way to reduce ticks, particularly when combined with landscaping changes that decrease tick habitats in often-used areas of your yard. Very small amounts of pesticides applied at the right time of year can go a long way in killing ticks.

## What is a Pesticide?

A pesticide is a substance intended to prevent, destroy, repel or mitigate any pest. Pests can be insects, mice and other animals, weeds, fungi, or microorganisms like bacteria and viruses. Many common household products are considered pesticides. These include insect sprays, disinfectants, products to kill mold and mildew, weed killers, some swimming pool chemicals and animal repellents. Pesticide products come with complete and detailed instructions--right on the label. Take time to read each section. You can tell how hazardous a pesticide can be to people by looking for the "signal word" on the label.

**Danger-Poison** means highly poisonous **Danger** means poisonous or corrosive **Warning** means moderately hazardous **Caution** means least hazardous.

Find additional information in the "Tick Management Handbook" PDF and "Tick-borne Diseases in Connecticut" PowerPoint presentation on the CD included with this guide. You may also find information on the DEP, Pesticide Management Program Website at: http://www.ct.gov/dep/cwp/view.asp?a=2710&q=324266&depNav\_GID=1712&depNav=|.

## Tips on Selecting a Commercial Pesticide Service

#### Selecting a Service

Get at least three estimates. Next, check with DEP Pesticide Management Program (860-424-3369) to see if firms you are considering are <u>registered</u> and employ individuals who are <u>licensed</u> to spray for ticks. Ask if there are any violations or complaints. Make sure that the company you select has liability insurance. Ask to see a certificate of insurance, and contact the insurance carrier. Connecticut does not require pest control companies to buy liability insurance. Also, do not forget to ask for references, and check them carefully. Here are some questions to ask.

- Will a written pest control plan be provided with information on the pesticide used?
- Will the company provide information about non-chemical pest control alternatives?
- Will the equipment be safe and up to date?
- Will signs be posted around my property after the application?

## **Know Your Pest**

Ticks do not jump, fly or drop from trees. They are found on tips of grass, low bushes, leaf litter or ornamental ground cover in shaded areas and in the woods. On lawns, most ticks are found within nine feed of the edge of the woods. Ticks are not usually found in sunny areas. The nymphal stage of the deer tick is most closely associated with human Lyme disease. Nymphs are very tiny (about the size of a pinhead) and are most active in the late spring and early summer months.

## **Commonly Used Pesticides For Tick Control**

Pesticides that kill ticks are called acaricides. Many are restricted for use by licensed applicators only. Least-toxic pesticides are preferable, and they are very effective. Consider using an organic or synthetic product in the chemical class called *pyrethrums*. In this class, *pyrethrins* are natural toxins produced from certain chrysanthemum flowers and *pyrethroids* are synthetic derivatives, which tend to be more effective.

## **Pesticide Warning**

Remember, no pesticide is 100% safe, even an organic pesticide. Most are highly toxic to fish, and should not be used near water. Here are some ways to learn more about pesticide safety and toxicity:

- Connecticut DEP Pesticide Management Program website: http://www.ct.gov/dep/cwp/view.asp?a=2710&q=324266&depNav\_GID=1712&depNav=|
- Call the National Pesticide Telecommunications Network at 1-800-858-7378.
- Read up on the topic. A suggestion: Pest Control for Home and Garden by Michael Hansen and the Editors of Consumer Reports.
- Visit the National Library of Medicine's website, http://toxnet.nlm.nih.gov.

## **Do's and Don'ts**

**Do:** Spray once in the late spring. Focus on early control of nymphal ticks, the stage most likely to transmit disease, by spraying in May or early June. If necessary, a fall application may be used to control the adult ticks and the number of larvae.

**Don't:** Spray monthly throughout the summer. One exception: some organic pesticide products breakdown rapidly and may require multiple applications.

**Do:** Spray areas where the lawn meets the woods. Treat tick habitats only.

**Don't:** Spray trees and centers of lawn. Do not spray trees or in sunny areas of your yard.

**Do:** Spray perimeter areas of the lawn often used by people. Focus on spraying the perimeter near areas that the family uses such as play areas, gardens, eating, and outdoor storage areas.

**Don't:** Spray unused areas of your property.



## Tick Testing for the Bacteria Associated With Lyme Disease (Borrelia burgdorferi) Information on Submitting Ticks

- Ticks will be accepted from citizens in Connecticut for identification only.
- Ticks to be identified and tested for pathogens must be submitted by health departments.
- Citizens who wish only to have a tick identified may submit the specimen in person or by mail. Identification to species, stage of development, and approximate attachment time can be completed.
- The following information should accompany the tick: Name, address, and telephone number of person submitting the tick; name, age, and sex of person bitten; date tick was removed; part of body where tick was found; town in which tick was acquired. For a submission form for providing this information see **Appendix E**.
- Please avoid sending the tick in a black plastic film canister, mounted on a glass slide or under cellophane tape. Package the tick in a crush-proof envelope or container for mailing.

## Ticks to be Tested for the Organism That Causes Lyme Disease

The procedure to be followed for having a tick identified and tested for *Borrelia burgdorferi*, the causative agent of Lyme disease, is as follows:

- Citizens need to bring the tick to their municipal or regional health department.
- The municipal or regional health department will submit the tick to the Experiment Station, with a request to have it tested.
- The tick will be identified to species, stage of development, and approximate degree of blood engorgement. The Laboratory will test engorged black-legged ("deer") ticks (*Ixodes scapularis*) and certain other species of ticks for the presence of spirochetes that cause Lyme disease. The American dog tick (*Dermacentor variabilis*) will not be tested. Unengorged deer ticks will not be tested.

## Tick Testing Guidelines for Municipal/Regional Health Departments

- Please include the following information with each tick: name of patient and/or health department accession number, age and sex of the person bitten, date on which the tick was found, part of the body where the tick was found, and the town in which the tick was acquired.
- Indicate if more than one tick is in a container.
- If the tick is alive, try to keep it alive. To prevent desiccation of the tick, place it in a small airtight container with several broad, fresh, green blades of grass.
- The best way to send a dead tick is in a small plastic zipper-locking bag or a clear plastic vial with a tight-fitting lid. Dry ticks are easier for us to process than ticks preserved in alcohol.

- For our safety and ease in handling, please avoid the following: plastic film canisters, especially those which are black; glass containers; ticks mounted on glass slides; ticks under cellophane tape and ticks preserved in formalin.
- Please package the ticks in crush-proof envelopes or containers for mailing. We generally receive ticks within one or two days of the postmark. Express mail service is probably not much faster.
- Results are communicated to the health departments in writing. The results of tests on live ticks are usually sent out within a week of receipt. Testing on dead ticks generally takes two to three weeks to complete. During peak tick season (summer months) it may take more time for results to be obtained.

## Tick Identification, Testing, and Information Laboratory General Information

Twenty-two different tick species have been collected in Connecticut. Six of these are known to feed on humans and to be associated with six different diseases (Lyme disease, anaplasmosis, babesiosis, Rocky Mountain spotted fever, Powassan encephalitis and tularemia). One of the most important preventive measures a person can take to avoid acquiring Lyme disease or other tick-associated illnesses is to find and promptly remove any and all attached ticks.

The Tick Identification, Testing, and Information Laboratory is part of the Department of Entomology of The Connecticut Agricultural Experiment Station. The laboratory identifies ticks to species, stage of development, and degree of engorgement (an indication of approximately how long the tick has been feeding). It also tests certain ticks for the presence of the bacterial organism that causes Lyme disease, *Borrelia burgdorferi*. In addition, the staff provides information about the biology and control of ticks. These services are provided for all Connecticut citizens.

Dr. John F. Anderson is responsible for this laboratory, and is assisted by Bonnie Hamid, Michael Vasil, and Roberta Ottenbreit. Office hours and phone access are Monday-Friday, 8:00 A.M. to 5:00 P.M.

Phone: (203) 974-8441 FAX: (203) 974-8502

For information about tick control, contact:

Dr. Kirby C. Stafford, III Head, Department of Forestry and Horticulture The Connecticut Agricultural Experiment Station

Phone: (203) 974-8485 Fax: (203) 974-8502

E-mail: Kirby.Stafford@po.state.ct.us

## **Private Laboratory Tick Testing**

For those residents who prefer sending their tick to a private laboratory, the following laboratories perform testing on ticks for the presence of the bacteria that cause Lyme disease.

## Analytical Services, Inc.

130 Allen Brook Lane P.O. Box 515 Williston, VT 05495 800-723-4432

http://www.analyticalservices.com/tick\_testing/index.html

PCR: \$75, dead or alive. Ziplock bag, no tape, overnight it. Results available 2 weeks.

## • Connecticut Pathologies Laboratories, Inc.

1320 Main Street, Suite 24 Willimantic, CT 06226 860-423-2775

PCR test: \$58, dead or alive, Lyme disease only. Results available 1 week.

#### IgeneX, Inc.

Palo Alto, CA 800-832-3200

http://www.igenex.com/ticktest.pdf

PCR test: \$60, dead or alive. Can test for 5 diseases @ \$60/test. Results available 10 to 12 business days; plastic tube or ziplock bag.

## • Imugen, Inc.

220 Norwood Park South Norwood, MA 02062 Attn: Tick Testing 1-800-246-8436

http://www.imugen.com/

PCR test \$75.00. Ziplock bag. Results available 15 business days.

It is advised that residents first contact the laboratory for updated information.

#### **CD Materials**

Included on the CDs are brochures, photographs, illustrations, and PDFs of a variety of educational materials (**Appendix F**). Some of these materials can be used to create educational posters, brochures, or promotional materials. The PDF documents can be printed and distributed during community meetings or advisory committee meetings.

Also included are recent statistics for Lyme disease by town and county and health district (**Appendix G**). This information is updated annually and is posted on the Connecticut Department of Public Health's website: <a href="www.ct.gov/dph">www.ct.gov/dph</a>. Select "Statistics & Research" from the left navigational bar. Then select "Disease & Injury Surveillance". From there select "Lyme disease". There are incidence maps, line lists, and graphs available for use.

The PowerPoint presentation that is included on the Local Health Tick-borne Community Intervention Program CD is meant to be a template. Notes were included; however, they can be rephrased and geared toward the community. Local health educators know their residents the best and we believe they are the best persons to determine what approach to use to educate their community.

IMPORTANT: Before you use the slide presentation, please revise the first slide to include the local health department name. Also revise the slide for "local resources" to include the local health department name and telephone number.

## In Closing

We hope you find this information helpful and useful. The intervention sites (Ledge Light Health District, Torrington Area Health District, and Westport Weston Health District) have contributed extensive hours to educating their residents about Lyme disease, its symptoms, and methods to prevent infection as well as tick control. Their involvement in this project has benefited their communities and hopefully will benefit others.

The key to reducing Lyme disease starts with prevention of the tick bite. Prevention starts with education. If residents have access to information concerning Lyme disease and they follow the recommendations of personal protection methods, including tick checks, many Lyme disease cases can be prevented.

Be creative, and get the word out that Lyme disease can be prevented it just takes YOU.

NOTE: Mention of a product or business should not be construed as an endorsement by the Connecticut Department of Public Health or any of its collaborators.

## Appendix A

**Potential Community Partners** 

## **Potential Lyme Disease Community Partners**

Local and regional agencies and professional groups may be available for the Lyme Disease Community Intervention Advisory Committee. These organizations represent a variety of interests and resources in your community. They can help in planning the various project activities for the community intervention program.

American Red Cross
Animal Control Officer
Boy Scouts
Chamber of Commerce
Children and Youth Groups
Civic Groups
Community Colleges
Conservation Districts
Corporate Foundations
CT AHEC Programs
Elected Officials
Garden Club
Girl Scouts
Health Care Professionals
Horticultural Society
Hospital
Human resources personnel
Kiwanis Club
Land Trust Associations
League of Women Voters
Librarians
Lion's Club
Lyme Disease Task Force
Master Gardener's Association
Mayors
Medical Assistants Assoc.
Medical Society
Municipal Government Officials
Nature Center or Nature Conservancy
Neighborhood Association Member from endemic area
Newspapers
Nursery
Organized Labor
Pest Control Operator
PTA/PTO
Public Schools/School System
Radio
Regional Council of Governments
Religious Groups
Rotary Clubs
School Nurses

Social Services
State Legislators
Television
Town Parks and Recreation Department
United Way
US Navy or Military Base
Veterinarian
Visiting Nurses Associations
Volunteer Groups
Wildlife Associations
Woman's Club
YMCA
YWCA

## Appendix B

Educational & Promotional Materials (free and purchased)

## **Materials Resources**

This is a short reference for educational and promotional materials. It is always beneficial to check with local businesses to determine who may be willing to give additional discounts. The internet is also a good reference for materials. When searching for Lyme disease educational materials, please try to download from a reputable government website such as the Department of Health & Human Services, the Centers for Disease Control and Prevention, or the Connecticut Department of Public Health.

## **FREE Materials Resources**

#### **Centers for Disease Control and Prevention**

"Lyme Disease A Public Information Guide" a 16 page PDF. CDC PO Box 2087 Fort Collins, CO 80522-6400 (970) 221-6400

Search for "Lyme Disease A Public Information Guide" at:

www.cdc.gov

## **Deptartment of Health & Human Services**

"Lyme Disease The Facts... The Challenge" a 32 page PDF. National Institutes of Health National Allergy & Infectious Diseases NIH Publication No. 03-7045

Search for "Lyme Disease The Facts... The Challenge" at:

www.niaid.nih.gov

## **Connecticut Department of Public Health**

For Lyme disease and other tickborne disease information, select "Disease & Prevention" from the left navigational bar, then select "Lyme disease" or "Tick Related Illness".

www.ct.gov

## The Connecticut Agricultural Experiment Station

Free Tick Management Handbook can be downloaded as a PDF.

http://www.ct.gov/caes/lib/caes/documents/publications/bulletins/b1010.pdf

#### Information on Deer Resistant Plants.

www.woodstockconservation.org/deer\_resistant\_plants.htm www.deerxlandscape.com/cgi-bin/webc.cgi/st\_main.html?p\_catid=9 www.hort.uconn.edu/plants/help/deerres/deerres.htm www.conngardener.com/samples/article4.html

## **PURCHASED Material Resources**

The list below offers some websites with links to businesses that offer promotional items and products.

## Yellowpages - Super Pages

http://yellowpages.superpages.com/yp.basic.jsp?

In "KEYWORDS" field type "Promotional" and in "LOCATION" type ", CT" (do not forget the comma "," before CT)

## **Yellow Pages**

http://www.yellowpages.com/

To search for a business in your area, in the "FIND" cell type in "Promotional" and in "LOCATION" type the town and state (i.e., New Haven, CT).

## Additional Yellow Page search engine

http://www.dexknows.com/

In the "WHAT" field type "Promotional" and in the "WHERE" field type ",CONNECTICUT" (do not forget the comma "," before CONNECTICUT).

### **Promotional Items & Products in Connecticut**

http://www.thomasnet.com/connecticut/promotional-items-products-63630701-1.html

#### CT Phonebook

http://www.ctphonebook.com/index.php

To search for Connecticut businesses, type "Promotional" in the appropriate cell.

Appendix C

**Media Contacts** 

## **Connecticut Public Access Channels & Studios**

## Adelphia/Lyme

Channel: 27 /N

Public Access Studio: Century Cable Television

78 Halls Road

Old Lyme, CT 06371 Coordinator: Holly Morin

Telephone Number: 860 887-3446

Fax Number: 860 889-4794

## Adelphia/Norwich

Channel: 14/A

Public Access Studio: Century Cable Television

238 West Town Street Norwich, CT 06360 Coordinator: Holly Morin

Telephone Number: 860 887-3446

Fax Number: 860 889-4794

#### **Cablevision of Connecticut**

Channel: 27

Public Access Studio: Cablevision of Connecticut

28 Cross Street Norwalk, CT 06851 Coordinator: Myles Rich

Telephone Number: 203 750-5774

Fax Number: 203 846-9412

### Cablevision of Litchfield

Cable: 5

Public Access Studio: Cablevision of Litchfield

622 Torrington Road Litchfield, CT 06759 Coordinator: Myles Rich

Telephone Number: 860 567-4589

Fax Number: 860 567-8531

## **Cablevision of Southern Connecticut**

Channel: 34, WFAC

Public Access Studio: Cablevision of Southern Connecticut

122 River Street Bridgeport, CT 06604 Coordinator: Myles Rich

Telephone Number: 203 696-4791

Charter Communications of Northeastern CT

Channel: 14

Public Access Studio: Charter Communications

207 Tuckie Road

North Windham, CT 06256

PA Studio Supervisor: Michael J. Nelson Telephone Number: 860-456-8500

Fax Number: 860 456-4130 Web: www.ctv14.com

## **Charter Communications Western CT**

Channel: 13

Public Access Studio: 140 Willow Street, #3

Winsted, CT 06098-1114 Coordinator: John Palinkas

Telephone Number: 860 738-5090

Fax Number: 860 738-5088

## **Charter Communications of Western CT**

Channel: Community Vision 21

Public Access Studio: Charter Communications of Western CT

11 Commerce Road Newtown, CT 06470-1655

Senior Coordinator: Greg Van Antwerp Telephone Number: 203 304-4048

Access Line: 203 304-4050

#### Comcast/Branford

1) Public Access Studio: ETV Channel: 18/Public Access

P.O. Box 120363 157 Main Street East Haven, CT 06512 Coordinator: Marie Saddig

Telephone Number: 203 469-6151

Web: www.easthavetv.org

E-mail: easthave@easthaventv.org

## 1) Public Access Studio: Soundview Community Media Inc.

211 State Street

Suite 405

Bridgeport, CT 06604

Coordinator: Thomas Castelot

Telephone Number: 203 345-0100, ext. 11

# 2) Public Access Studio: East Haven High School (YJTV)

Channel: Yellow Jacket TV 19

35 Wheel Barrow Lane East Haven, CT 06513 Coordinator: Chris Dutro

Telephone Number: 203 468-3345 or 468-3267

Fax Number: 203 468-3818

# 3) Public Access Studio: Town of East Haven

Channel: 20/Government Access

250 Main Street

East Haven, CT 06512

Coordinator: Frank Gentilesco Telephone Number: 203 468-3204

Fax Number: 203 468-3372

# 4) Public Access Studio: Branford Community TV (BCTV)

Channels: 18, 19 and 20/PEG\* Access

P.O. Box 1091 Branford, CT 06405

President: Ali Abulugma: ali1379@aol.com

Station Manger: Laurie Champagne - laurie@branfordtv.org

Telephone Number: 203 481-3232

Fax Number: 203 481-3232 Web: www.branfordtv.org/ E-mail: studio@branfordtv.org

# 5) Public Access Studio: GCTV - Guilford Community Television

Channels: Channels: 18, 19 & 20

29 Soundview Road

P.O. Box 275

Guilford, CT 06437

Coordinator: Jeffrey Lincoln

Telephone Number: 203 453-3383

Fax: 203-453-8458

Web: www.home.cshore.com/gctv/

E-mail: gctv@cshore.com

## 6) Public Access Studio: Madison Community TV - MCAG

Channel: Madison Community Access Group-

Channel: 18 & 19 6 Campus Drive Madison, CT 06443

Pres./Cont. - Ch. 18: Abigail White Contact – Ch. 20: Peter Van Strum Telephone Number: 203 245-5677

# 7) Public Access Studio: Daniel Hand High School

Channel: 19/Educational Access

302 Green Hill Road Madison, CT 06443 Coordinator: Joe Tenczar

Telephone Number: 203 245-6350

# 8) Public Access Studio: North Branford High School

Channel: Channel: 19

Foxon Road

North Branford, CT 06471 Coordinator: Mrs. Robert Ward Telephone Number: 203 484-1471

# 9) Public Access Studio: NHTV

Channels: 18 and 20/Public and Government Access

127 Washington Avenue North Haven, CT 06473

Program Director: Walter Mann Telephone Number: 203 234-0025

Web: www.nhtv.com E-mail: info@nhtv.com

# 10) Public Access Studio: North Haven Middle School

Channel: 19/Educational Access

55 Bailey Road

North Haven, CT 06473 Coordinator: Pat Schiller

Telephone Number: 203 239-1683

Fax Number: 203 239-4566

#### 11) Public Access Studio: WPAA

Channel: Channel: 18 (Public), 20 (Govt.)

128 Center Street
Wallingford, CT, 06492
President: Sharon Kesilewski
Coordinator: Jason Burghardt
Telephone Number: 203 294-9722
Fax Number: 203 265-6310

# 12) Public Access Studio: Sheehan High School

Channel: 19/Educational Access

E-mail: WPAA-TV@SNET.NET

142 Hope Hill Road Wallingford, CT, 06492 Coordinator: Randall Backus Telephone Number: 203 294-5999

Fax Number: 203 294-5983

# 13) Public Access Studio: WGTV Television Wallingford

Channel: 20/Government Access

6 Fairfield Boulevard Wallingford, CT, 06492 Manager: Scott Hanley

Telephone Number: 203 294-2199

Fax Number: 203 294-2073

# 14) Public Access Studio: North Branford Public Cable Access Group, Inc.

TOTOKET TV

Channel: 18 (Public), 19 (Educ.), 20 (Govt.)

999 Foxon Road, Suite #31 North Branford, CT 06471 President: William Bergers Coordinator: Cliff Huizenga Telephone: 203 484-7084 E-Mail: TotoketTV@yahoo.com

#### Comcast/Hartford

Channel: 5

# 1) Public Access Studio: Bloomfield Access Television

330 Park Avenue Bloomfield, CT 06002

Coordinator: Howard Frydman Telephone Number: 860 243-9710

# 2) Public Access Studio: East Hartford Community TV

Channel: 5 740 Main Street

East Hartford, CT 06108 Coordinator: Irene Cone

Telephone Number: 860 289-0552

## 3) Public Access Studio: Hartford Public Access TV

Channel: 5

20 – 28 Sargeant Street Hartford, CT 06105

Executive Director: J. Stan McCauley Telephone Number: 860 524-8621 Fax Number: 860 524-8459

E-Mail: accessgranted@accesstv.org

# 4) Public Access Studio: Simsbury Community TV

Channel: 5

754 Hopmeadow Street

P.O. Box 767

Simsbury, CT 06070

Station Manager: Gary Rosansky Telephone Number: 860 658-1720

# 5) Public Access Studio: WHC-TV

Channels: 5, 21 and 22 PEG\* Access

50 South Main Street West Hartford, CT 06107

Coordinator: Cheryl Fine, Executive Director

Telephone Number: 860 570-3717 Fax Number: 860 523-3200 E-mail: cherty@aol.com

# 6) Public Access Studio: WIN TV

Channel: 5

599 Matianuck Avenue Windsor, CT 06095

Coordinator: John C. Pickens Telephone Number: 860 688-2626

#### Comcast/Northwest

Channel: 11

Public Access Studio: Comcast Lakeville Connecticut

77 South Canaan Road Canaan, CT 06108 Director: Marshall Miles

Telephone Number: 860 480-1639

E-mail: info@catv11.com

#### Comcast/Plainville

Channels: 5, 21, and 22

Public Access Studio: Nutmeg TV

58 West Main Street Plainville, CT 06062

Executive Director: Wyland Dale Clift, Executive Director & Gen. Counsel

Telephone Number: 860 793-2552

Fax Number: 860 793-2883 E-mail: wclift@nutmegtv.org Website: www.nutmegtv.org/

## Comcast/Vernon

Channel: 5

Public Access Studio: Community Voice Channel

105 Notch Road P.O. Box 9171 Bolton, CT 06043

Coordinator: Patricia Higgins Telephone Number: 860 645-1454

Fax Number: 860 645-1635 Email: CVCch5@aol.com

## Comcast/Clinton

Channel: 34

Public Access Studio: Comcast Cablevision of Clinton, Inc.

21 East Main Street Clinton, CT 06413

Coordinator: Dan Matteson

Telephone Number: 860 669-9417

Fax Number: 860 669-9135

# Comcast/Danbury

Channel: 23

Public Access Studio: Comcast Cablevision of Danbury, Inc.

5 Shelter Rock Road Danbury, CT 06810 Coordinator: Dave King

Telephone Number: 203 792-1265

Fax Number: 203 792-9396

## Comcast/Groton

Channel: 36

Public Access Studio: Comcast Cablevision of Groton, Inc.

401 Gold Star Highway Groton, CT 06340

Coordinator: Frank Facchini Telephone Number: 860 449-1477

Fax Number 860 445-4800

Channel: 19

Public Access Studio: Town of Groton Board of Education

Same as above Channel: 2

Public Access Studio: Town of Groton Municipal Agencies

Same as above

#### Comcast/Middletown

Channel: 3

Public Access Studio: Comcast Cablevision of Middletown, Inc.

19 Tuttle Place

Middletown, CT 06457 Coordinator: Greg Pomfret

Telephone Number: 860 613-3035

Fax Number: 860 632-2871

## Comcast/New Haven

Channels: 27, 28 and 29

Public Access Studio: Citizens Television, Inc.

2666 State Street

Hamden, CT 06517-2232

Executive Director: Joseph L. Schofield Telephone Number: 203 562-2288

Fax Number: 203 562-0864 Website: www.citizenstv.net/

#### Cox/Enfield

Channel: 8

Public Access Studio: MediaOne

5 Niblick Road Enfield, CT 06082

Contact: Sandra Zukowski - 860 698-6120

Telephone Number: 800 572-5575 & 860 698-6124

Fax Number: 860 698-6118

#### Cox/Manchester

Channel: 14,15, and 16 PEG\* Access

Public Access Studio: Cox Communications, Inc.

801 Parker Street Manchester, CT 06040

Contact: Greg Thresher - 860 432-5017 & 860 432-5016

Peter Talbot – 860 432-5012 Fax Number: 860 512-5115

# 1) Public Access Studio: Wethersfield Community Television

Channel: 14 105 Marsh Street Wethersfield, CT 06109 President: Richard Garrey

Telephone Number: 860 721-8814

## 2) Public Access Studio: Rocky Hill Community Television

Channel: 2754 Main Street Rocky Hill, CT 06067

President: Algot A. Hagglund - 860 563-9581

Telephone Number: 860 257-7488

# 3) Public Access Studio: Newington Community Television

Channel: 14/Government Access

90 N. Welles Drive Newington, CT 06111

President: Everett Weaver – 860 666-0845

Edward Pizzella – 860-666-8457 Telephone Number: 860 667-5814

Fax Number: 860-667-5819

# Cox/Meriden

Channel: 15

Public Access Studio: Cox Cable Meriden, Inc.

1701 Highland Avenue, #6

Cheshire, CT 06410

Contact: Duane Pierre - 203 439-7072 Matthew Thibodeau - 203 439-7080

Fax Number: 203 250-2006

# **Eastern Connecticut Cable Television, Inc.**

Channel: 25

Public Access Studio: Eastern CT Cable TV

61 Myrock Avenue Waterford, CT 06385

Coordinator: Mary Jane Rickard Telephone Number: 1-800-253-2285

Fax Number: 860 422-5616

# **Tele-Media Waterbury**

Channel: 13 Skye Cable XIII

Public Access Studio: WSKY Cable 13

117 Sharon Road Waterbury, CT 06705

Manager: Stephen W. Mindera, Jr. Telephone Number: (203)755-1113

Fax Number: (203)755-1113 Web: www.skye13.com/

# **Tele-Media Seymour**

Channel: 10

Public Access Studio: Tele-Media Company of Western CT

80 Great Hill Road Seymour, CT 06483

Coordinator: Melissa Leonard

Telephone Number: 203 736-2692, ext. 532

Fax Number: 203 734-3425

# **Connecticut Media Outlet Websites**

Radio Stations www.gebbieinc.com/radio/ct.htm

Television www.gebbieinc.com/tv/ct.htm

Connecticut Newspapers by town from the New England Press Association www.nepa.org/Newspaper Directory/connecticut.htm

www.das.state.ct.us/Resource\_Dir.asp - State%20Media

# Appendix D

**Sign-in and Contact List Templates** 

Lyme Disease Community Intervention Meeting  Date:				
Name	Address	Phone Number	E-mail Address	

# **Advisory Committee Contact List**

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Name	Address	E-mail Address	Work Phone/FAX	Cell Phone		

# Appendix E

**Tick Submission Form for the CAES** 



# Information Required from People Submitting Ticks Tick Submission Form

(Only those ticks that are engorged will be tested)

(Only those tions that are	ongergea niii be teetea)				
Information on person/health department submitting tick (to whom the reoprt will be sent)					
Name: Address: Sta					
Information on person bitten by tick.					
Name: Sex (circle one): Male Female D Part of body where the tick was found: Town in which the tick was acquired:	Pate Tick was Removed:				

# **Mailing Address:**

Dr. John F. Anderson The Connecticut Agricultural Experiment Station P. O. Box 1106 New Haven, CT 06504

# Physical Address (for bringing specimens in person, UPS, FedEx, etc.):

Dr. John F. Anderson Room 204, Slate Laboratory The Connecticut Agricultural Experiment Station 123 Huntington St. New Haven, CT 06511

If you have any further questions please call (203) 974-8441.

# Appendix F

**Useful Materials Available on the Enclosed CD** 

# **Pictures & Illustrations**

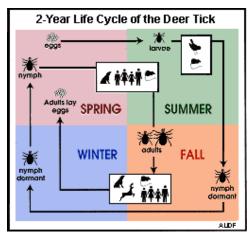
For use in any educational materials you may want to create. Select and copy the picture to be used and paste it into the new document. Additional pictures are available on the CD in the folder entitled "Images".



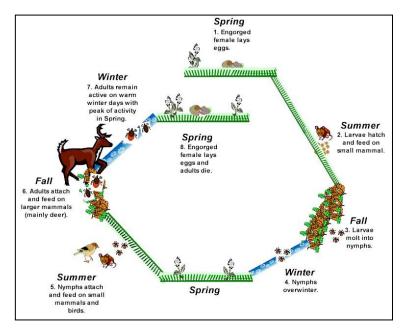
CDC (Actual tick size using centimeter scale)



CDC (Borrelia burgdorferi bacterium)



American Lyme Disease Association (Tick life cycle)



DPH (Tick life cycle)



CDC (Erythema migrans rash)

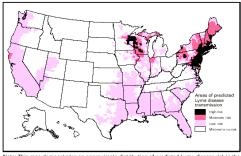


LLHD (Child and dog in leaf litter)



LLHD (Women in garden)

National Lyme disease risk map with four categories of risk



Note: This map demonstrates an approximate distribution of predicted Lyme disease risk in the United States. The true relative risk in any given county compared with other counties might differ from that shown here and might change from year to year. Risk categories are defined in the accompanying text. Information on risk distribution within states and counties is best obtained from state and local public health authorities.

CDC (National Lyme disease risk map)



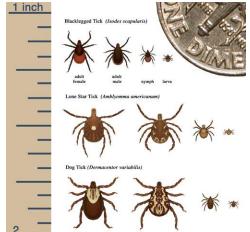
CDC (Spraying insect repellent)



CDC (Ixodes scapularis (deer) tick)



CAES (Mulch barrier near play station)



CDC (Comparative tick chart)



CDC (Tick removal)



LLHD (Demonstration site)



CAES

(Landscape manipulation for a Tick Safe Zone)

# **PDF documents**

Electronic copies of these documents are available on the CD entitled, "Local Health Lyme Disease Intervention".

- American Dog Tick Connecticut Agricultural Experiment Station (CAES)
  - o Fact Sheet 4 pages
- Landscape Brochure WWHD/CAES
  - o Bulletin 2 pages
- Lyme Disease Brochure CDC
  - o A Public Information Guide 16 pages
- Personal Protection WWHD
  - Bulletin 6 pages
- Tick Bite Prevention CAES
  - Fact Sheet 2 pages
- Tick Control CAES
  - Fact Sheet 2 pages
- Tick Management Handbook CAES
  - o Booklet 71 pages
- Ticks CAES
  - o Fact Sheet 2 pages
- Tick-borne Diseases CAES
  - o Fact Sheet 6 pages

# Appendix G

**Lyme Disease Statistics, Connecticut**